

MATH 255 ELEMENTARY STATISTICAL METHODS, Sections 5, 9

Class Times: Sec 9: MT RF, 11:00 – 11:50, Sci A201; Sec 5: 2:00 – 2:50 MTWR, Sci A202

Instructor: Daniel Harnett

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Office Hours: MT RF 10:00 – 10:50, also 1:00 – 1:50 MTWR, or by appt.

Course Description:

4 cr. Fundamental concepts and techniques that underlie applications to various disciplines, including descriptive statistics; averages; dispersion; random sampling; binomial, normal, Student T, Chi-square, and F distributions; estimation and tests of hypothesis; linear regression and correlation; laboratory emphasis on sampling and applications. **This course was formerly known as MATH 355.**

Required Materials:

1. **Text:** **Introduction to the Practice of Statistics**, 8th Ed. by Moore, McCabe and Craig.
2. **Calculator:** TI-83, TI-83+, TI-84, or TI-84+ recommended. You need a calculator with basic statistical functions including mean and standard deviation. Cellphone calculators and in general calculators that communicate with other calculators are NOT allowed during tests.
3. **Computer access:** This course will use Microsoft Excel (other spreadsheets are fine) and MINITAB. This software is available at all UWSP computer labs. You are expected to have access to your UWSP email and Canvas account at UWSP.

Course Learning Outcomes: The two main branches of introductory Statistics can be classified as *descriptive* and *inferential*.

- Descriptive Statistics – numerical and graphical means to study, summarize and communicate about data.
- Inferential Statistics – mathematical methods to make conclusions or decisions on the basis of partial information.

By the end of the course, students will understand and use some of the most popular statistical methods, including those in the catalog description above. In addition, students will be alert to issues of data quality and scientific approaches to gathering information.

General Education Learning Outcomes: This course satisfies the Quantitative Literacy (QL) component of the General Education Program. These general ‘deliverables’ will be emphasized throughout the course. Successful students will be able to:

- Select, analyze, and interpret appropriate numerical data used in everyday life in numerical and graphical format.
- Identify and apply appropriate strategies of quantitative problem solving in theoretical and practical applications.
- Construct a conclusion using quantitative justification.

In general, I want you to approach data like a scientist. The main tasks involved are: Exploring data, quantifying uncertainty, drawing valid conclusions, and communicating results using written and graphical methods.

Attendance: You are expected to attend every class. In general, this is a course in which you cannot afford to miss a class. If you are absent, for any reason, it is your responsibility to talk with others who were present and get notes from them. You are responsible for making sure that you have copies of all materials distributed in class, announcements made in class, and content covered in class. Missed quizzes will not be made up, but there will be extra quizzes during the semester. If you miss an exam (DON'T!), it is YOUR responsibility to contact the instructor ASAP.

Homework and Quizzes: There will about 7 written homework assignments during the semester. Due dates will be announced in class, and the assignments will be listed on the Canvas page. For written assignments, you must write a complete solution to each problem, bare answers without support will receive no credit. Graphs should be labeled. Late homework will not be accepted without the instructor’s permission. You may work on the homework with others, but each student must write and turn in their own complete assignment. In addition, there will up to two short quizzes per week. These quizzes will be easy and are partly an attendance device. Missed quizzes may not be made up, but up to 3 of your lowest quiz grades will be dropped.

Exams: There will be three exams during the semester, plus a final exam. The exam dates and content will be announced in class well in advance. The first exam will be at the end of Chapter 2, probably on Thursday, February 14.

Final Project: There will be a Final Project, due on the last day of class. Think of it as a 2-3 page paper, longer than a regular homework. You will receive detailed instructions in class.

Final Exam: The comprehensive final exam will be on **Monday, December 16, 5:00 pm, in Sci A121.**

Grade Calculation:

Homework	18%
Quizzes	10%
3 Exams	42%
Final Project	12%
Final Exam	18%
Total	100%

Grades for each assignment and exam will be recorded on your Canvas page. Questions about individual grades must be addressed within one week from the day the paper is returned to you.

Your letter grade will be assigned based on the following scale:

A: 93-100%	A - : 90-92%	B+: 87-89%
B: 83-86%	B-: 80-82%	C+: 77-79%
C: 73-76%	C- : 70-72%	D+: 67-69%
D: 60-66%	F: 59 % or less	

The above table is a minimum guide, the instructor may make positive adjustments at the end of the semester.

Help Available:

MATH ROOM: Drop-in help and by appointment; A113 Science

INDIVIDUAL TUTORING: TLC

STUDY GROUPS: Meet with your peers on a regular basis; Free

INSTRUCTOR OFFICE HOURS: See office hours, above.

Academic Integrity: You should be fully aware of your rights and responsibilities as a UWSP student. These are detailed in the UWSP Community Bill of Rights and Responsibilities found at https://www.uwsp.edu/dos/Documents/UWS_14.docx

Information regarding Section 504 of the Rehabilitation Act or the Americans with Disabilities Act can be found at the UWSP Disability and Assistive Technology Center site <https://www.uwsp.edu/datc>

Religious Beliefs: Students' sincerely held religious beliefs will be reasonably accommodated with respect to all examinations and other academic requirements. According to UWS 22.03, you must notify the instructor within the first three weeks of classes about specific dates which require accommodation. See the link below: https://www.uwsp.edu/dos/Documents/UWS_CHAPTER_22.docx